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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,475	09/06/2006	Gudmundur Gunnarsson	2006_0998A	5886

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WENDEROTH, LIND & PONACK, L.L.P.
1030 15th Street, N.W.,
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EXAMINER

LE, HOA T

ART UNIT	PAPER NUMBER
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1788

NOTIFICATION DATE	DELIVERY MODE
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02/09/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/585,475	Applicant(s) GUNNARSSON ET AL.	
	Examiner H. (Holly) T. Le	Art Unit 1788	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 27-49 is/are pending in the application.
- 4a) Of the above claim(s) 19 and 30-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 27-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

2. Claims 1-19 and 27-49 are pending. Claims 19 and 30-49 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention. The election has been treated as an election without traverse as set forth in the last office action.

Claim Rejections - 35 USC § 103

3. Claims 1-18 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,780,005 to Olerud ("Olerud'005) in view of US 4,537,699 to Jas ("Jas'699") in combination with: (1) 5,800,608 to Bomal et al ("Bomal'608") or (2) 5,876,494 to Bomal et al ("Bomal'494").

Claim 1: Olerud'005 teaches a method of making precipitated silica from olivine comprising : (1) providing olivine particles; (2) removing coarse impurities; (3) mixing the refined olivine with concentrated hydrochloric acid to a slurry, and reacting for a period of time; (4) separation of precipitated silica from mother solution; (5) removing impurity grains; and (5) washing and drying the precipitated silica. See Olerud'005, col. 1, line 62 to col. 2, line 12; col. 3, lines 20-54; col. 9, lines 10-53. Olerud'005 teaches the coarse impurities being removed before the acid leaching process in order to save acid used during the leaching (Olerud'005, col. 3, lines 47-53); however, it would have been obvious that the impurity removal step can be done after the acid leaching if

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consumption of the acid is not a concern. Olerud'005 does not teach using sodium aluminate to lower the viscosity of the silica slurry. Jas'699 teaches that the rheological properties of precipitated silica suspension can be improved by adding sodium aluminate and adjust the pH of the slurry. See Jas'699, claims. Therefore, one of ordinary skill in the art would have been motivated by the teaching of Jas'699 to include the step of lowering viscosity of the slurry prior to drying the precipitated silica. Jas'699 does not specify the steps of aging, dispersing, and removing of impurities in the slurry. Bomal teaches that aging, dispersing, and removing of impurities of a slurry containing precipitated silica and sodium aluminate. See Bomal'494 or '608, claims. One of ordinary skill in the art would have found it obvious to age, disperse and remove impurities in the slurry of Jas'699 as taught by Bomal because Bomal states that such steps would improve the dispersibility, mechanical properties and rheological properties of the resulting silica. See Bomal'494 or Bomal'608, col. 1, lines 54-61.

Claim 2: Adjust the pH of the silica slurry within the claimed range is taught by Jas'699. See Jas'699, claims.

Claim 3: The particle size of the olivine is in the range of 0.1-0.5mm (Olerud'005, col. 3, lines 42-45).

Claims 4-11 and 27: Adjusting the reaction temperature and time to achieve optimal results would have been obvious through experimentations.

Claims 12-18, 28 and 29: Concentration of the sodium aluminate in the suspension is suggested by Jas'699. See Jas'699, claims.

Response to Arguments

4. Applicant argued that the process of Olerud requires pre-treating the olivine. The claims as recited do not preclude pretreated olivine as the starting material.

5. Applicant further argued that Jas does not teach olivine as the starting material. However, Applicant concedes that Jas is concerned with improving rheological properties of silica by adding aluminum compound to a water silica suspension. From this teaching of Jas, one of ordinary skill in the art would be motivated to modify the silica suspension of Olerud by adding aluminum compound in order to improve the rheological properties of the resulting silica.

6. Applicant argued that Jas fails to mention any of ageing, dispersing the aged slurry and removing the impurities, and drying the silica. Ageing the silica slurry containing aluminum compound, dispersing the aged slurry, removing impurities and drying the silica are taught by either of the Bomal patents as discussed in the rejection to claim 1 above. Note also that removing impurities and drying silica are taught by Olerud. See rejection to claim 1 above.

7. Applicant's arguments filed November 30, 2010 have been fully considered but they are not persuasive for the reasons set forth in paragraphs 4-6 above.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. (Holly) T. Le whose telephone number is 571-272-1511. The examiner can normally be reached on 12:30 p.m. to 9:00 p.m. (EST), Mondays to Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. (Holly) T. Le/
Primary Examiner, Art Unit 1788

February 4, 2011